

CLAIMS

1. In a computer system having a logical structure for encapsulating multiple streams of data that are partitioned into packets for holding samples of data from the multiple data streams, a method of incorporating error correction into the logical structure, comprising the steps of:

designating a portion of at least one packet for holding error correcting data;
and

storing error correcting data in the designated portion of at least one packet.

2. The method of claim 1, further comprising the step of using the error correcting data stored in the designated portion of at least one packet to correct an error.

3. The method of claim 1 wherein the error correcting data is stored in multiple packets.

4. The method of claim 1 wherein the error correcting data holds parity bits.

5. The method of claim 1 wherein packets holding samples of data from a first of the multiple streams holds a different type of error correcting data than packets holding samples of data from a second of the multiple streams.

6. The method of claim 1 wherein the logical structure includes a header that holds information regarding what error correcting methodology is used with the at least one packet that holds error correcting data.

7. The method of claim 1, further comprising the step of:
transferring the packets across a transport medium to a destination computer.

8. The method of claim 1 wherein at least two of the multiple streams of data are of different media.

9. In a computer system, a method comprising the steps of:
storing data from multiple streams of data into packets;
storing error correcting data in at least some of the packets;
encapsulating the packets into a larger stream; and
storing information regarding what error correcting methods are employed for the packets in the larger stream.

10. The method of claim 9 wherein the larger stream includes a header and the information regarding the error correcting methods that are employed is stored in the header.

11. The method of claim 10 wherein multiple error correcting methods are employed.

12. The method of claim 11 wherein a separate object is stored in the header for each error correcting method to encapsulate the information regarding the error correcting method.

13. In a computer system that is coupled to a designation, a method comprising the steps of:

storing samples of data from multiple data streams in packets;
storing replicas of information in at least some of the packets;
setting a flag in the packets that hold the replicas to indicate that the packets hold replicas;
encapsulating the packets into a larger logical structure; and
transmitting the logical structure to the destination.

14. The method of claim 13 wherein the replicas of information hold property information regarding the samples of data.

15. The method of claim 13 wherein portions of a sample are stored in selected packets and a replica of property information regarding the sample is stored in each packet in which a portion of the sample is stored.

16. The method of claim 13, further comprising the step of examining one of the replicas of information at the destination when one of the packets is lost during the transmitting.

17. In a computer system having a source computer and a destination computer having a clock that regulates timing of activities at the destination computer, a method comprising the steps of:

providing a logical structure for encapsulating multiple streams of data, said streams of data being stored in packets;

storing clock licenses that dictate advancement of a clock in multiple ones of the packets;

transmitting the logical structure from the source computer to the destination computer; and

for each packet that holds a clock license, advancing the clock at the destination computer as dictated by the clock license in response to receiving the packet at the destination computer.

18. The method of claim 17 wherein each clock license includes a time value to which the clock at the destination computer is to be advanced.

19. The method of claim 18 wherein each clock license includes an expiration time after which the clock license is invalid.

20. In a distributed system having a computer system that is coupled to a destination via a transport medium, a method comprising the steps of:

- providing a stream format for encapsulating multiple streams of data;
- including a field in a logical structure that adopts the stream format for specifying a packet size for holding samples of the multiple streams of data;
- storing a value in the field that corresponds with a desired packet size;
- storing packets of the desired size within the logical structure that adopts the stream format; and
- transmitting the logical structure over the transport medium to the destination.

21. The method of claim 1 wherein the logical structure that adopts the stream format holds a field for a maximum packet size and a field for a minimum packet size.

22. The method of claim 20 wherein at least two of the multiple streams of data hold data of different media.

23. In a distributed system having a computer system that is connected with a destination via a transport medium, a method comprising the steps of:

- providing a stream format for encapsulating multiple streams of data;
- including a field in a logical structure that adopts the stream format for holding a value that specifies a maximum bit rate at which the multiple streams of data may be rendered at the destination;
- storing a value in the field; and
- transmitting the logical structure over the transport medium to the destination.

24. In a data processing system, a method comprising the steps of:

- providing a stream format for encapsulating multiple data streams;
- dynamically defining a new media type;
- storing an identifier of the new media type in a logical structure that adopts the stream format; and

storing packets of data of the new media type in the logical structure.

25. The method of claim 24 wherein the data processing system includes a transport medium and a target computer, further comprising the step of sending the logical structure over the transport medium to the target computer.

26. The method of claim 24 wherein a renderer for the new media type is stored at the target computer, wherein the logical structure includes a field that identifies a renderer and wherein the method further comprises the step of accessing the field in the logical structure that identifies the renderer at the target computer to determine what renderer to use to render data of new media type.

27. In a computer system having a logical structure for encapsulating multiple streams of data that are partitioned into packets for holding samples of data from the multiple streams of data, a computer-readable storage medium holding instructions for:

designating a portion of at least one packet for holding error correcting data;
and

storing error correcting data in the designated portion of at least one packet.

28. The computer-readable storage medium of claim 27 holding instructions that store the error correcting data in multiple packets.

29. The computer-readable storage medium of claim 27 wherein the medium holds instructions for encapsulating a first type of error correcting data for packets that hold samples from a first of the streams of data and encapsulating a second type of error correcting data for packets that hold samples from a second of the streams of data.

30. In a computer system, a computer-readable storage medium holding a logical structure that encapsulates multiple streams of data, said logical structure comprising:

packets of data from the multiple streams of data for transmission over a transport medium; and

error correcting data within at least some of the packets at designated locations.

31. The computer-readable storage medium of claim 30 wherein the logical structure further comprises a header in which information regarding an error correcting method that uses the error correcting data is stored.

32. The computer-readable storage medium of claim 31 wherein the header holds information regarding multiple error correcting methods.

33. The computer-readable storage medium of claim 30 wherein the multiple streams of data include at least two streams of different media.

34. In a computer system, a computer-readable storage medium holding instructions for:

receiving a logical structure that holds multiple streams of data wherein said streams of data include samples that are stored in packets in the logical structure and wherein at least some of the packets include error correcting data; and

extracting the error correcting data from at least some of the packets as needed to correct errors.

35. In a computer system, a computer-readable storage medium holding a logical structure that includes:

samples of data from multiple data streams in packets;
replicas of information in at least some of the packets; and
a flag in the packets that holds the replicas to indicate that the packets hold replicas.

36. The computer-readable storage medium of claim 35 wherein portions of a sample are stored in selected packets and a replica of property information regarding the sample is stored in each packet in which a portion of the sample is stored.

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37. In a computer system, a computer-readable storage medium holding a logical structure that encapsulates:

multiple streams of data wherein the streams of data are stored in packets;
clock licenses that each dictate advancement of a clock that regulates rendering of the data in the packets.

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38. The computer-readable storage medium of claim 37 wherein each clock license includes a time value to which the clock at the destination computer is to be advanced.

39. The computer-readable storage medium of claim 38 wherein each clock license includes an expiration time after which the clock license is invalid.

40. In a computer system that is coupled to a destination computer via a transport mechanism, a computer-readable storage medium holding a logical structure comprising:

multiple streams of data; and
a value in a field that specifies a maximum bit rate at which the multiple streams of data may be rendered at the destination computer.

41. A data processing system having:
a source computer with a storage;
a logical structure stored in storage for encapsulating multiple data streams, data from said data streams being incorporated in packets;
error correcting data encapsulated in the packets.

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42. A data processing system having:

- a source computer with a storage;
- a logical structure stored in storage for encapsulating multiple data streams, data from said data streams being incorporated in packets;
- a clock license being encapsulated into at least one packet for advancing a clock at a destination when processed at the destination.

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